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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,115	01/14/2002	David Appleyard	48903 DIV	6661

26474 7590 03/04/2003

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1350 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

LU, C CAIXIA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 03/04/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,115

Applicant(s)

APPLEYARD ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/275,771.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the copolymer species of propylene/ethylene copolymer, Claims 1,2 and 4-6 in Paper No. 11 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

*should have been
deleted.*

Specification

2. The disclosure is objected to because of the following informalities: in Table 2, .
Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 103(a) as obvious over Kashiwa et al. (US 4,668,753).

The instant claims are directed a process for producing biaxially stretched polypropylene copolymer films wherein the ethylene comonomer content of the copolymer is from 0.7 to 1.4 wt.%, the cold-xylene-soluble fraction of the copolymer is from 1.0-2.5%, the processability index of the copolymer (PI) is greater than 18, and the copolymer is prepared in the presence of a specified Ziegler-Natta catalyst composition.

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Kashiwa teaches (i) a biaxially stretched propylene/ethylene copolymer with high isotacticity wherein the ethylene content in the copolymer is in the range of 0.1 to 2.0 mole % (2.0 mole % converts to 1.3 wt %) (col. 1, lines 15-36); (ii) a biaxial stretching process (col. 9, lines 19-63), and (iii) a polymerization process for preparation of the propylene/ethylene copolymer in the presence of a Ziegler-Natta catalyst composition which is substantially similar to that of the instant claims (col. 4, lines 30-44 and Examples 1-3).

It is noted that the ethylene contents of Kashiwa's working examples are not in the range of 0.7 to 1.4 wt. % of the instant claims, e.g., the ethylene content of Kashiwa's Example 3 is 0.9 mole% (0.6 wt. %), the highest of the three working examples.

However, Kashiwa does expressly teach the upper limit of the ethylene content of the copolymer to be 2.0 mole % (1.3 wt %) which encompasses that of the instant claims. At the time of the invention, a skilled artisan would have understood that as the ethylene content of the propylene/ethylene copolymer increases, the isotacticity of the copolymer decreases, and the processability of the copolymer with higher ethylene content would be improved because the copolymer is less crystalline.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Kashiwa's teaching to prepare a biaxially stretched propylene/ethylene copolymer film with the ethylene content towards the high end of the range, 2.0 mole %, in order to improve the processability of copolymer in the film making process and in the absence of any showing of criticality and unexpected results.

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It is also noted that Kashiwa does not expressly the cold-xylene-soluble fraction of the copolymer in the range of 1.0-2.5%, the processability index of the copolymer (PI) of greater than 18. However, those are the inherent properties of the copolymer. Because the polymers disclosed in Kashiwa are made by processes using catalyst compositions substantially similar to those disclosed in the instant specification, when the ethylene content of Kashiwa's copolymer overlaps with the range of the instant claims, one would have expected Kashiwa's copolymers to be substantially identical to copolymers of the instant claims, thus, Kashiwa's copolymer would inherently have properties which are substantially identical to those of the copolymer of the instant claims.

The limitations of all claims have been considered and are deemed to be within the purview of the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (703) 306-3434. The examiner can normally be reached on 9:00 a.m. to 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.



Caixia Lu, Ph.D.
Primary Examiner
Art Unit 1713

CL
February 26, 2003